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Tactical Plan for Health Information Management in British Columbia:

Nine Key Projects in Six Months

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Introduction

This document is the first in a series of tactical plans for health information management in British Columbia. It builds on the six goals outlined in the document entitled *Information for Health, A Strategic Plan for Health Information Management in British Columbia 2002/03 – 2006/07* (Strategic Plan), and provides a map on how the health authorities and the ministries plan to fulfill these goals.

Information for Health
Six Goals

- SHARING OF CAREGIVER INFORMATION
- PUBLIC ACCESS TO HEALTH INFORMATION
- PROVISION OF AGGREGATE HEALTH INFORMATION
- LEVERAGING OF TECHNOLOGY
- EFFICIENT USE OF PUBLIC RESOURCES
- ENHANCED KNOWLEDGE MANAGEMENT

The Strategic Plan focuses on "what". The tactical plans will focus on "how". A detailed routing or list of every project related to the six goals of the Strategic Plan is not the aim of the tactical plans that will unfold in the coming months. There are literally dozens of projects in the health authorities and the ministries related to these goals. Instead, the tactical plans will focus on:

- Single health authority projects that have strong provincial implications
  (example: Electronic Medical Summary)
- Cross health authority projects that build common solutions and approaches
  (example: Infrastructure)
- Provincial projects
  (example: Provider Registry Uptake)

Each tactical plan will focus on a specific piece of the Health Chief Information Officer Council's (Health CIO Council) work over a tightly defined time period. This plan, *Nine Key Projects in Six Months*, concentrates on key Electronic Health Record (EHR) projects for the period ending November 2003, narrowing down the focus of the Council on this complex, multi-dimensional undertaking. Its purpose is to kick-start EHR development in British Columbia.

The nine projects described in this document, despite being grouped under goal one of the Strategic Plan, also contribute to the plan's other five goals. The scope of these projects is such that their impact will be felt in all areas. All nine projects are interrelated and dependent upon each other for long-term success.

The projects profiled in this document are complex and long-term undertakings. However, the major milestones outlined in each project description will be reached by November 2003.

In the coming months the Health CIO Council will profile specific projects on its website: http://healthnet.hnet.bc.ca/. This website will be a clearinghouse for data on Strategic Plan projects. It will allow the health authorities and the ministries an opportunity to share project plans, lessons learned and best practices. It will include the council's plans, reports, provincial initiatives, products, services, policies, standards and links to other relevant websites.

Tactical plans will be 'works in progress' given the dynamic nature of the information technology environment and the health care sector. They will be continuously updated to reflect new developments and approaches.

The Nine Projects

The nine projects covered in this tactical plan are:

- Physician Information Management/Information Technology (IM/IT) Strategy
- Electronic Medical Summary (e-MS)
- Infrastructure
- BC Healthcare Client Identity Management Strategy
- Provider Registry Uptake
- Electronic Health Record (EHR) Architecture
- Diagnostic Imaging Services and Infrastructure
- Clinical Broker
- Pharmanet Uptake

Ten key elements of each project are outlined. They are:

- Project Name
- Project Description
- Project Sponsors
- Stakeholders
- Six-month Objectives/Milestones
- Major Deliverables
- CIO Council Lead/Working Group Lead
- Health Authority Participation/Resources Required
- Major Links to Other Projects
- National Context

Project Title:	***PHYSICIAN INFORMATION MANAGEMENT / INFORMATION TECHNOLOGY (IM/IT) STRATEGY***
Project Description:	Develop a common strategy and approach for interacting with physicians on initiatives related to electronic access to clinical information. Develop a common understanding of the benefits, limitations and issues related to the use of technology within a physicians' practice, and recommend action items to help guide stakeholders in decision-making and investments.
Project Sponsors:	Marian Knock, Executive Director, Primary Health Care, Ministry of Health Services (MOHS) Darlene Letendre, Executive Director, Health Benefits Operations, MOHS John Schinbein, CIO, Ministry of Health Services and Ministry of Health Planning (MOHS/P)
Stakeholders:	Primary Health Care physicians Specialist physicians Physicians affiliated with hospitals The BC Medical Association (BCMA) Health Authority CIO's Private sector vendors
Six Month Objectives/Milestones:	Phase I, scheduled to be completed by September 30, 2003, will: • Establish stakeholder agreement on the scope and approach to engaging physicians and private sector • Identify the various existing physician groups and private sector players that should be brought into discussions • Enlist BCMA and direct physician support for processes • Define, agree-upon and implement processes for physicians participation • Identify and prioritize business needs • Identify and prioritize obstacles to physician acceptance and uptake of technology

	• Demonstrate convergence of various technology initiatives being undertaken across the healthcare sector • Gain a common understanding of ongoing support issues • Define pilot projects • Achieve understanding and support by physicians of the pathways and roadmap to electronic information access and electronic information sharing
	Long term objectives include: • Support continuity of care while maintaining the privacy of individuals • Aid decision making by physicians • Establish common access approaches
Major Deliverables (Phase One):	Deliverables include: • Analysis of current situation (environmental scan) • A detailed report identifying priority business needs and obstacles to widespread adoption • High-level report outlining a common physician engagement strategy and recommendations • Implemented process for physician involvement in EHR • High level report outlining and demonstrating convergence • Defined pilot projects • Recommendations on applicability of strategies for other healthcare professions • Strategic plan for the ongoing engagement of physicians over the remainder of the project • Detailed plan for the next stage
CIO Council Lead:	John Schinbein, CIO, MOHS/P Joseph Mendez, CIO, Northern Health Authority
Working Group Lead:	Stuart Frampton, Director, Information Management Group (IMG) – HealthNetBC, MOHS/P

Health Authority Participation/Resources Required:	All health authorities
Major Links to Other Projects:	• BC Healthcare Client Identity Management Strategy • Chronic Disease Management Tool Kit • Vancouver Island Health Authority Chronic Disease Management Network • Primary Care Initiative • Vancouver Coastal Health Authority CareConnect Initiative
National Context:	Management Infrastructure. The project fits in 'Generation 1 - The Foundation,' as defined in Canada Health Infoway Inc.'s Business Plan model. One of the participating physician groups has been invited by Infoway to be one of the physician representative groups within the Infoway EHR project.

Project Title:	***ELECTRONIC MEDICAL SUMMARY (E-MS)***
Project Description:	The e-MS consists of a standardized core dataset of key health information in support of health care decisions that can be communicated electronically between physician office information systems or transmitted over secure transport protocols to sites with only a personal computer. The e-MS is initially expected to include a summary of key health information including patient demographics, allergies, medications, current problems, recent procedures and diagnostics.
Project Sponsors:	Marian Knock, Executive Director, Primary Health Care, MOHS John Schinbein CIO, MOHS/P

Stakeholders:	Primary Health Care physicians, nurses and other primary health care providers Health authorities The BCMA Ministry of Health Services, Primary Health Care Ministry of Health Services, IMG
Six Month Objectives/Milestones:	Phase one, scheduled to be completed by September 30, 2003, will: • Establish stakeholder agreement on the functional and business requirements • Define the e-MS's data content standard • Define the preliminary application, technology and architecture standards • Gain preliminary endorsement of the standards
Major Deliverables (Phase One):	Deliverables include: • Analysis of current situation (environmental scan) • Establishment of e-MS business requirements • Exploration and articulation of priority business processes • Exploration and articulation of e-MS advantages for primary health care providers • Confirmation of achievable priorities for the initiative based on consultation • Validation of the e-MS concept • Strategic plan for e-MS delivery over the remainder of the project • A detailed plan for the next stage
CIO Council Lead:	Brian Shorter, CIO, Vancouver Island Health Authority
Working Group Lead:	Ted Matthews, Project Manager, e-MS, Vancouver Island HA George Fettes, Senior Business Consultant, IMG, MOHS/P

Health Authority Participation/Resources Required:	• Vancouver Island Health Authority (VIHA) will be the initial implementation health authority. At least one other health authority will implement within the four-year window of the Primary Health Care Transition fund (by March 2006). • Resources required: budget and staff provided (an already funded project).
Major Links to Other Projects:	• Physician IM/IT Strategy • Provider Registry Uptake • Client Identity Management Strategy • Chronic Disease Management Tool Kit • VIHA Chronic Disease Management Network • Electronic Health Record Architecture
National Context:	Project is linked to the Western Health Information Collaborative (WHIC) Multi-Jurisdictional Collaboration Proposal for a Western Canada Chronic Disease Management Infrastructure. The project also fits in 'Generation 1 - The Foundation,' in the Canada Health Infoway Inc.'s Business Plan.

Project Title:	***INFRASTRUCTURE***
Project Description:	Infrastructure covers fundamental information sharing components such as data networks, directories, and authentication services. These are the lower layers of the electronic health records architecture, which must be in place to enable secure electronic sharing of healthcare information in B.C. This project will define an agreed architecture for B.C. healthcare infrastructure, which will allow for the secure electronic sharing of healthcare information within and across health authority boundaries.
Project Sponsors:	Health CIO Council

Stakeholders:	All health authorities and the health ministries
Objectives:	April – September 2003: Physical Network: • Complete a WAN/MAN network inventory in each health authority and the ministries, detailing current contracts (suppliers, length, costs, coverage – including dark fibre), IP addressing schemes, etc. • Identify overlaps and duplication in network services and document redundancies • Define an agreed go-forward strategy and architecture for providing the secure network reach and capacity needed (both within and between health authorities) at the lowest overall cost • Develop a common strategic approach to BC Net and other major players Authentication Trusts and Directories: • Assess current status/directions regarding authentication and directories in each health authority and the ministries • Identify areas of commonality and divergence • Define an agreed architecture and approach for directory integration and cross-domain trust models, both within and between health authorities, with a focus on immediate design guidance required by health authorities to ensure future interoperability Secure Remote Access: • Share remote access pilot experiences July – December 2003: Network Security Architecture: • Assess current status/directions regarding network security (firewalls, etc.) in each health authority and the ministries • Identify areas of commonality and divergence • Define an agreed architecture and approach for network security, both within and between health authorities, with a focus on network security tuning and best practices

	Secure Remote Access: • Assess current status/directions regarding secure remote access (VPN's etc.) in each health authority and the ministries • Identify areas of commonality and divergence • Define an agreed architecture and approach for secure remote access that allows caregivers who cross health authorities to use consistent technologies and authentication factors Future infrastructure areas to be addressed by the Technical Advisory Group include voice communications, operating system standards, thin-client technologies, e-mail naming conventions, cross-authority calendaring and collaboration, secure e-mail, video-conferencing, network management, time services.
Major Deliverables:	Cross-authority agreement on: • Physical network strategy and architecture • IP address naming standards • Network security architecture • Authentication trust and directory architecture • Secure remote access architecture
CIO Council Lead / Working Group Lead:	Colin King, Architect, Clinical Systems, Vancouver Coastal Health Authority (VCHA), supported by the Technical Advisory Group
Health Authority Participation/ Resources Required:	All health authorities and MOHS/P
Major Links to Other Projects:	• ISO 17799 and Privacy Codes of Practice • Industry Canada's Broadband for Rural and Northern Development • Health Canada First Nations and Inuit Health Branch Satellite RFP • Telehealth future strategy • Premier's Technology Council recommendations • VCHA / PathNET / Soltrus pilot

	• Provider Registry
National Context:	Federal government's Broadband Taskforce Report, Key Enabler in Canada Health Infoway Inc. Business Plan model.

Project Title:	***BC HEALTHCARE CLIENT IDENTITY MANAGEMENT STRATEGY***
Project Description:	The purpose of this project is to collaborate with the six geographic health authorities to reach a consensus and to make a recommendation to the Health CIO Council on a provincial client identity management strategy, which will enable accurate, consistent, unique and timely identification of consumers of healthcare services within and across health authorities.
Project Sponsors:	John Schinbein, CIO, MOHS/P
Stakeholders:	All health authorities HealthNet/BC, IMG, MOHS/P
Six Month Objectives/Milestones:	Objectives include; • Review regional and provincial client identity management initiatives • Identify client identity management business problems • Gather and document high-level client identity management requirements • Review other jurisdiction and industry client identity management solutions • Investigate and develop options for client identity management strategies • Obtain consensus on provincial client identity management options and strategies, and make recommendations to the Health CIO Council • Consult with the Western EHR Regional Collaborative (WERC) to identify common business requirements and

	standards currently being developed in other provinces • Determine what level of participation will be required of service providers (i.e. practitioners, pharmacists) to identify client identity management strategies
Major Deliverables:	BC Healthcare Client Identity Management Strategy Report
CIO Council Lead/ Working Group Lead:	Colin King, Architect, Clinical Systems, VCHA Lorna Young, Project Manager, IMG, MOHS
Health Authority Participation/Resources Required	All health authorities
Major Links to Other Projects:	• Healthcare Privacy Codes of Practice Project (for privacy issues related to the collection and disclosure of patient information) • Provider Registry Project (for corporate registry initiatives and EHR building block components) • Regional Health Authorities and Provincial Health Services Authority Master Patient Index (MPI) initiatives (for requirements and interoperability) • EHR and other EHR building block projects • Western EHR Regional Collaborative projects (for consultation with other provinces on client identity management options and solutions) • Client Registry HL7 Messaging and Education Roadmap Project, Canadian Institute for Health Information (CIHI) • Unique Personal Identifier/Client Registry Implementations in other jurisdictions (Newfoundland, Capital Health Region – Edmonton, Australia, UK etc.)
National Context:	• 'Generation 1 - The Foundation,' in Canada Health Infoway Inc.'s Business Plan model • Contact will be initiated with; Newfoundland, Alberta, Capital Health Region Edmonton, Manitoba Health, and Western Health Information Collaborative.

Project Title:	***PROVIDER REGISTRY UPTAKE***
Project Description:	To implement a co-ordinated plan to support the uptake and use of the Provider Registry by health authorities and the Ministries
Project Sponsors:	John Schinbein CIO, MOHS/P
Stakeholders:	Health authorities, Ministries and Provider Registry sources
Six Month Objectives/Milestones:	Objectives include; • Identify opportunities within Health Authorities and Ministries to implement the Provider Registry in the next fiscal year • From defined opportunities define targets for early adoption • Identify potential inhibitors to uptake and develop mitigating strategies • Develop a plan for overall co-ordination and support of Provider Registry uptake • Adapt the WHIC Provider Registry uptake tool kit for use in BC • Provide requirements to the Canada Health Infoway Inc. Provider Registry projects that will further assist in the adoption and business use and value of the Provider Registry • Develop within the Ministries the appropriate support to aid with Health Authority implementations
Major Deliverables:	Deliverables include: • Provincial plan for co-ordinated Provider Registry uptake. • Agreed list for early Provider Registry uptake by Health Authorities and Ministries • Provider Registry uptake 'Tool kit'

	• Early Health Authority Provider Registry uptake complete or active projects underway with target completion within fiscal year • Provider Registry uptake support infrastructure established within Ministries
CIO Council Lead/ Working Group Lead:	John Schinbein, CIO, MOHS/P Stuart Frampton, Director, IMG – HealthNetBC, MOHS/P
Health Authority Participation/Resources Required:	All health authorities
Major Links to Other Projects:	Canada Health Infoway Inc. Provider Registry projects
National Context:	Canada Health Infoway Inc. is funding enhancements to Provider Registry with the expectation to make it a Pan-Canadian standard.

Project Title:	***ELECTRONIC HEALTH RECORD (EHR) ARCHITECTURE***
Project Description:	The project focuses on the development of an overall federated architecture between the health authorities and the ministries to allow specific EHR projects and approaches to be positioned within a common framework.
Project Sponsors:	John Schinbein, CIO, MOHS/P
Stakeholders:	Health authorities, Canada Health Infoway, vendor community
Six Month Objectives/Milestones:	Validate the city planning metaphor as an organizing theme for the Electronic Health Record federated service oriented architecture. City planning implies an approach where there is: • Maximum project and operational autonomy within a common framework

	• Framework of usages and participant roles versus a centrally driven detailed blueprint • Build-out via independent projects , consistent with the framework, over an extended time frame rather than a single, monolithic effort • Collaborative identification and prioritization of needed shared facilities and infrastructure versus a completely ad hoc or central technocratic approach • Agreement on appropriate usage patterns and their placement as a way of harmonizing and converging approaches versus detailed product and configuration constraints and • Framework evolution, and project conformance and variance process, including supporting documentation required The Project's objectives are to: • Engage health authority and ministries architects in exploring potential approaches based on this theme • Determine level of detail required to document the city plan • Codify long-term intent, the evolution framework, design patterns, shared facilities, placement and approval standards so that development decisions can be made by Health Authorities • Recommend ongoing processes, roles and responsibilities • Clarify business-to-business (B2B) standards and components and • Identify roles and relationships

Major Deliverables:	Deliverables include; • High-level architectural design document • Recommended process for managing architectural decisions, including governance models and • Environmental scan of architectural approaches in other jurisdictions
CIO Council Lead: **Working Group Lead:**	John Schinbein, CIO, MOHS/P Mike Leavy, Senior Manager, Architecture & Standards, IMG, MOHS/P
Health Authority Participation/Resources Required	All health authorities Working Group to be determined
Major Links to Other Projects:	• Canada Health Infoway initiatives • Each health authority's architecture plan • All other key *Tactical Plan* projects
National Context:	Project will be aligned with Canada Health Infoway Business Plan and funded initiatives

Project Title:	***DIAGNOSTIC IMAGING SERVICES AND INFRASTRUCTURE***
Project Description:	Implement Picture Archiving and Communication Systems (PACS) throughout the Fraser Health Authority to achieve 98 percent 'film-less' throughout the entire health authority
Project Sponsors:	Marc Pelletier, VP, Clinical Support, Health Protection, and Systems Evaluation, Fraser Health Authority (FHA) Bill Dow, Director, Diagnostic Imaging, FHA

Stakeholders:	Diagnostic Imaging departments, physicians, Emergency Rooms, orthopaedic physicians in Fraser Health Authority
Six Month Objectives/Milestones:	By November 1, 2003 implement all features of the PACS at Royal Columbian Hospital (RCH) and Eagle Ridge Hospital (ERH) sites.
Major Deliverables (Phase One):	RCH, ERH, Ridge Meadows Hospital (RMH) sites 'film-less' by January 1, 2004. Begin integration with physician offices
CIO Council Lead/ Working Group Lead:	Neil Currie, CIO, Fraser Health Authority
Health Authority Participation/Resources Required:	Approach should be replicable and interoperable for other health authorities.
Major Links to Other Projects:	• Fraser Health Authority Migration Strategy • BC EHR Initiatives • Provider Registry
National Context:	Canada Health Infoway providing major funding

Project Title:	***CLINICAL BROKER***
Project Description:	Develop a tool that will enable the movement of clinical information (messages with or without clinical document(s) between organizations/ providers in support of the business processes within PHSA. Project includes distribution of reports as well as movement of patient specific information between organizations/providers including reports, referrals etc. Future directions of use of this technology are broad.
Project Sponsors:	Don Henkelman, CIO, PHSA

Stakeholders:	Primary Health Care physicians; Specialist physicians; Physicians affiliated with Hospitals Hospitals Health Authority CIO's Private sector vendors
Six Month Objectives/Milestones:	Objectives include; • Determine the functional requirements • Development strategy • Build and test initial functionality • Introduce initial Clinical Broker functionality to selected groups • Establish initial interfaces with selected physician office systems
Major Deliverables (Phase One):	Deliverables include: • Strategy document for the development and implementation of the clinical broker • Architecture for development • Initial projects using functionality • Detailed plan for the next stage(s)
CIO Council Lead/ Working Group:	Don Henkelman, CIO, Provincial Health Services Authority
Health Authority Participation/Resources Required:	Other Health Authorities, through their CIO's, as available and interested.

Major Links to Other Projects:	• Physician Information Management/Information Technology Strategy • Electronic Medical Summary (as potential object) • Provider Registry Uptake • Primary Care Initiative • Client Identity Manage ment project
National Context:	

Project Title:	***PHARMANET UPTAKE***
Project Description:	To actively accelerate the access to and use of PharmaNet drug history and drug interaction data to aid in clinical decision making by physicians within health authority facilities.
Project Sponsors:	Nerys Hughes, Director Pharmacare Operations, MOHS health authority CIOs
Stakeholders:	Pharmacare and health authorities
Six Month Objectives/Milestones:	Objectives include; • Identify opportunities within health authorities to increase the access to and use of PharmaNet Medical Practioner Access to Pharmanet (MPAP) and emergency department access service offerings • Develop a plan for overall co-ordination and support of PharmaNet uptake by Health Authorities • Identify potential inhibitors to uptake and develop mitigating strategies and • Provide input to Pharmacare on strategies to improve uptake and value of MPAP and emergency department access to PharmaNet by health authorities

Major Deliverables (Phase One):	Deliverables include: • List of uptake opportunities for current fiscal year; • Net new accesses to PharmaNet enabled in Health Authority facilities (target – 80 percent of uptake opportunities identified) and • A report or other coordinated mechanism for Health Authorities to provide feedback on to Pharmacare on PharmaNet access business value
CIO Council Lead/ Working Group Lead:	John Schinbein, CIO, MOHS/P Stuart Frampton, Director, IMG – HealthNetBC, MOHS/P
Health Authority Participation/Resources Required:	All health authorities
Major Links to Other Projects:	MPAP access for physicians' offices
National Context:	Will provide clinical value and change management insight to Canada Health Infoway Inc in support of Pharmacy components of the EHR.

Working Group leads are responsible for providing periodic updates on the status of the projects to the Health CIO Council, including identifying any issues, delays or unanticipated barriers to achieving project milestones. A progress report will be prepared following the end of this phase as outlined in this Tactical Plan.

Glossary of Terms

BCMA	BC Medical Association
CIHI	Canadian Institute for Health Information
EHR	Electronic Health Record
e-MS	Electronic Medical Summary
ERH	Eagle Ridge Hospital
FHA	Fraser Health Authority
Health CIO Council	Health Chief Information Officer Council
IHA	Interior Health Authority
IM/IT	Information Management/Information Technology
IMG	Information Management Group
MOHS	Ministry of Health Services
MOHS/P	Ministry of Health Services and Ministry of Health Planning
MPAP	Medical Practioner Access to Pharmanet
MPI	Master Patient Index
NHA	Northern Health Authority
PACS	Picture Archiving and Communication Systems
PHSA	Provincial Health Services Authority
RCH	Royal Columbian Hospital
RMH	Ridge Meadows Hospital
Strategic Plan	*Information for Health, A Strategic Plan for Health Information Management in British Columbia 2002/03 – 2006/07*
VCHA	Vancouver Coastal Health Authority
VIHA	Vancouver Island Health Authority
WERC	Western EHR Regional Collaborative
WHIC	Western Health Information Collaborative